

MERCURY – What Everyone Should Know

LaNetta Alexander, MS
ISDH Epidemiology Resource Center

With all the various stories in the news, we've been seeing lately about mercury spills, thermostat removal problems and kids playing with the metallic beads of liquid mercury, are we prepared or know exactly what to do (or not to do) if we actually had a mercury spill occur in our homes? Likewise, those who work in health-related fields may be asked, "my son just dropped the fever thermometer on the bathroom floor, what should I do?" Hopefully, the following information will provide enough knowledge to make you comfortable with answering the above question as well as heighten your own awareness.



Mercury is a naturally occurring metal produced as a result of normal breakdown of minerals in the earth's crust. It can be found not only in thermometers but also in other commercial and industrial items such as irons, thermostats and fluorescent light bulbs. Liquid mercury (also known as elemental mercury) forms small beads or droplets when spilled and can accumulate in the tiniest of places. Mercury can also exist as a gas. Mercury can become airborne when coal is burned for fuel or when mercury-containing wastes are incinerated. Mercury also combines with carbon to form organic mercury compounds. The most common of these is methylmercury, produced mainly by microscopic organisms in the water and soil. It is this form of mercury that is associated with uptake in fish, potentially causing contamination from fish to humans when consumed.



In addition to being exposed to mercury through eating fish and shellfish, people may also be exposed to mercury by absorbing mercury vapors released from dental fillings, using medicinal products such as antiseptics or skin lightening creams, and coming in contact with air, water, or soil contaminated with mercury. Much information is available on mercury in terms of recycling, proper disposal, and spill and cleanup information, which can be obtained through local health and environmental agencies. As a general rule, if a small quantity (e.g. a fever thermometer) is spilled on a hard surface, the small beads formed should be easy to pick up, perhaps with a card, stiff paper or eyedropper if necessary. Collect the mercury into a leak-tight plastic bag or sturdy plastic container with a screw on lid. If clothing or shoes have been contaminated, they will need to be placed in a plastic bag. All contaminated material needs to be disposed of at your local solid waste recycling facility or household hazardous waste facility. Call the Indiana Department of Environmental Management (IDEM) at 800-988-7901 during normal business hours or go to their website to obtain the current listing of solid waste management districts at www.in.gov/IDEM/oppta/recycling/index.html.

If mercury is spilled on a carpeted surface or other cloth material, carefully gather up the material with the mercury in the middle of the item; put it in a trash bag and seal for disposal. The same disposal procedures discussed above would apply here as well. If the item is not removable (carpeting, furniture) you can use an eyedropper to remove visible mercury or tape to pick up the beads, but use care. Never use a broom or paintbrush, as those will break the mercury into smaller beads and possibly scatter the material. Never use an ordinary vacuum or shop vacuum to clean up mercury, as that will blow vapors into the area, likely increasing the likelihood of human exposure (inhalation) as well as contaminating the vacuum cleaner. Keep the affected room cool to minimize mercury evaporation and close all heating/air-conditioning vents until cleanup is complete. Ventilate the room for at least 24 hours, moving air through the room to release the mercury vapors outside. If mercury slips between cracks of linoleum or hardwood surfaces, the surface can be sealed with an epoxy paint or other sealing agent. The only way to assure that a large surface is free of mercury contamination is to remove the area in question. To request air testing, individuals can contact the ISDH Indoor Air and Radiologic Health section at (317) 351-7190, ext. 256. Any spill or breakage of a mercury-containing item should be reported immediately to the Indiana Department of Environmental Management (IDEM) Spill Line at (317) 233-7745 or (888) 233-7745.

Minor mercury mishaps do not have to be traumatic experiences. With education, planning and knowledge of resources available, household mercury spills can be safely remedied.
